



# Public Service Commission

## State of North Dakota

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January 22, 2010

Jeffrey W. Fleischman, Director  
OSM Casper Field Office  
PO Box 11018  
150 East "B" Street, Room 1018  
Casper, WY 82602-5004

**RE: Request for Authorization to Proceed for 2010 Buechler/Velva, 2010 Williams County Road 9 Phase 5, and 2010 Beulah/Zap Phase 11 Projects in North Dakota.**

Dear Mr. Fleischman:

Please find enclosed documentation to support our Request for Authorization to Proceed with the 2010 Buechler/Velva, 2010 Williams County Road 9 Phase 5, and 2010 Beulah/Zap Phase 11 Projects. Also attached is an eligibility determination letter for these projects.

Updated environmental assessments for these projects are attached. Although no reclamation has been conducted on the specific pits at the Buechler/Velva sites, previous reclamation has been conducted within the Buechler problem area. The Williams County Road 9 Phase 5 and Beulah/Zap Phase 11 projects are continuations of previous reclamation work.

We have requested concurrence for these projects from the North Dakota State Historical Society, U.S. Fish and Wildlife Service, North Dakota Parks and Recreation Department, and the North Dakota State Department of Health. Any outstanding responses to these requests for concurrence will be forwarded to you as we receive them. Because no off-site pit dewatering is planned and all runoff from areas to be affected at the Buechler/Velva project site will flow into abandoned mine pits, consultation with the Army Corps of Engineers is not needed.

Mr. Jeffrey Fleischman  
January 22, 2010  
Page 2

A public meeting to discuss the 2010 Buechler/Velva Project was held January 20, 2010. The Williams County Road 9 and Beulah/Zap Projects are continuations of previous reclamation work and public meetings were held in Williston (Williams County) on February 7, 2008, and at Beulah on January 29, 2009.

If additional information is needed or you have any questions, feel free to call Bill Dodd at 701-328-4101 or me at 701-328-2251.

Sincerely,

A handwritten signature in black ink, appearing to read "James R. Deutsch", written in a cursive style.

James R. Deutsch  
Director  
Reclamation and AML Divisions

Enclosures

#### List of Attachments

1. Standardized Environmental Assessment for Buechler/Velva AML Project (January 2010)
2. Standardized Environmental Assessment for Williams County Road 9 AML Project (January 2010)
3. Standardized Environmental Assessment for Beulah/Zap AML Project (January 2010)
4. Project Location Maps for 2010 Buechler/Velva, Williams County Road 9 and Beulah/Zap Projects
5. Requests for Concurrence for 2010 projects and responses received to date
  - ND State Historical Society
  - ND State Department of Health
  - ND Parks & Recreation Department
  - U.S. Fish and Wildlife Service
6. Eligibility Determination for 2010 Projects
7. AMLIS Summaries for Buechler/Velva, Williams County Road 9, and Beulah/Zap Sites.

# **STANDARDIZED ENVIRONMENTAL ASSESSMENT**

**Buechler/Velva  
Abandoned Mine Lands Project  
ND004  
Ward County, North Dakota**

**Prepared by**

**North Dakota Public Service Commission**

**In Cooperation With**

**United States Department of Interior  
Office of Surface Mining Reclamation and Enforcement  
Casper Field Office**

**(January 2010)**

## **Section I Introduction**

### **A. Need for the Action**

The principal objective of the Public Service Commission is to reclaim potentially hazardous portions of two surface mines located within the W½ of Section 27, Section 28 and the NE¼ of Section 30, T152N, R81W approximately seven to nine miles southwest of Velva, North Dakota, population 1,049.

The surface mine located in Sections 27 and 28 contains dangerous highwalls near trails. Erosional gullies cutting into adjacent farmland is also a concern. About 150 acres of surface mine land will be reclaimed with the Buechler/Velva Project, but the entire problem area site is much larger.

On the west side of the surface mine located in Section 30, there are steep final pit highwalls ranging in height up to approximately 90 feet. Slides, erosional backcutting and sloughing along the highwall are good indications of its instability.

To our knowledge, there have been no instances of death or personal injury attributable to the abandoned mines; however, the potential for death or injury is inherent due to the location of the abandoned mines.

### **B. Project Background**

The Buechler problem area is composed of numerous and extensive surface and underground coal mines located in Ward County, T152N, R82W, Sections 15, 23, 24 and 25 and T152N, R81W, Sections 19, 27, 28, 29 and 30. This AML site is characterized by dangerous highwalls near trails and other AML hazards.

The Buechler AML problem area is within seven miles of the corporate limits of Velva, North Dakota, and encompasses approximately 1,185 acres. Surface and underground mining was conducted from the 1910's to the early 1970's. Current land use of the area is designated as agricultural (farming and grazing land). Anticipated land use of the area will remain agricultural (pasture and hayland).

## **Section II**

### **Description of the Proposed Project and Alternatives**

The proposed reclamation project for this site will be beneficial to the general public and meets the requirements of federal and state law for reclamation. Besides the elimination of hazards to the general public and the landowners, the reclamation will be beneficial to the existing land use, vegetation, wildlife and topography.

The plan of action for the proposed reclamation activity will be to backfill dangerous highwalls with material from adjacent spoil piles. Erosional drainage channels, which flow over the steep dangerous highwalls, will be repaired and re-established to a non-erosive slope.

To the degree possible, topsoil will be salvaged from the disturbed areas and respread once the dirt work has been completed. Approximately 10,750 feet of hazardous highwall will be eliminated through the proposed reclamation operations. The reclaimed areas will be fertilized, seeded and mulched. Revegetation would be done with a seed mixture compatible to the quality of available plant growth material.

Options or alternatives include backfilling, fencing of hazard areas or no action. Backfilling is the preferred option. The no action option does not solve the AML problems at the site and fencing is not considered a viable option. The proposed reclamation activities should have no long term adverse effects on the environment. Any temporary disruption of wildlife habitat will be a short term effect.

The approved North Dakota Abandoned Mine Lands State Reclamation Plan identifies backfilling as an effective reclamation technique.

### **Section III**

#### **Existing Environmental Documents**

The environmental concerns of the proposed project are addressed in an Environmental Impact Statement (EIS) prepared by the Office of Surface Mining Reclamation and Enforcement entitled "Approval of State and Indian Reclamation Program Grants Under Title IV of the Surface Mining Control and Reclamation Act of 1977": (OSM-EIS-11, November 1983). Please reference the following documents for further information.

Chapter III, Affected Environmental Rocky Mountain/Northern Great Plains Region

Section 3.5.2.2, Adverse Impacts Related to Highwalls, pp. III-24  
Subsections 3.5.2.2.1, 3.5.2.2.12, pp. III-24 to III-26

Chapter IV, Environmental Consequences Rocky Mountain/Northern Great Plains Region

Section 4.2.2, Impact Common to Remedial Actions, pp. IV-3 to IV-7

Section 4.3.2 Reclamation of Highwalls, pp. IV-11  
Subsection 4.3.2.1, pp. IV-11 to IV-12.

## **Section IV Site Specific Review**

- A. Cultural or historic resource values (the Archaeological Resources Protection Act of 1979; the Archaeological and Historic Preservation Act of 1974; the National Historic Preservation Act of 1986, as amended; the Antiquities Act of 1906, Executive Order 11593, concerning the protection and enhancement of the cultural environment; the American Indian Religious Freedom Act of 1978; the Historic Sites Act of 1978; and, OMB Circular A-102).**

A letter was sent December 11, 2009, to the North Dakota State Historical Society requesting comments concerning the cultural resources of this site. The North Dakota State Historical Society responded on December 15, 2009, concurring with a no historic properties affected determination.

- B. Water quality values (Clean Water Act, as amended)**

There are no streams present on or near the proposed project area. Reclamation efforts at the Buechler/Velva project areas will have no adverse effect on water quality.

- C. Wetlands values (Clean Water Act, Executive Order 11990, and Army/EPA Memorandum of Agreement (MOA) Concerning the Determination of Mitigation under the Section 404(b) (1) Guidelines)**

No wetlands are located within the Buechler/Velva project areas.

- D. Flood values (Executive Order 11988)**

The project areas are not contained within an identified floodplain.

- E. Wildlife (Endangered Species Act and Fish and Wildlife Coordination Act)**

The U.S. Fish and Wildlife Service has been contacted, for their response to identification of any threatened or endangered plant or animal species that may be located on or near the proposed project site, in a letter dated December 11, 2009.



A letter was also sent to the North Dakota Game and Fish Department requesting concurrence for the work proposed at this site.

There has been no other sensitive wildlife identified in the proposed project area.

**F. Prime and unique farmland values (Farmland Protection Policy Act)**

There has been no prime farmland identified on the proposed project site.

**G. Recreational resource values (Wild and Scenic Rivers Act, Clean Air Act)**

There are no lands in the proposed project area classified as Wilderness Area or lands being studied for wilderness.

There are no lands in the proposed project area identified as areas of critical environmental concern.

There are no lands in the proposed project area included in the Wild and Scenic River category.

There are no parks or areas of critical ecological or aesthetic concern found in the proposed project area.

**H. Air quality (Clean Air Act)**

The proposed project area is not in or near a Class I air quality region.

There are no conditions on the existing site of the proposed project that affect air quality of the nearby area.

**I. Socioeconomic factors**

There will be no adverse socioeconomic effect from the reclamation of this site.

**J. Political factors**

Meetings between the North Dakota Public Service Commission and local governing entities are ongoing and will continue throughout project completion. County officials and landowners have expressed interest in reclamation of the

proposed areas. A public meeting has been scheduled on January 20, 2010, in Minot, North Dakota, to discuss this project with local residents, city and county officials and the general public.

**K. Existing Vegetative Cover**

Highwalls and pits are mostly vegetated. The adjacent spoil includes dozer and scraper built piles and spoil piles resulting from draglines used in the mining operations. The spoil material is composed of mostly sands and clays. The spoil piles are fairly vegetated. Dominant plant species include Smooth brome grass (*Bromis inermis*), Western wheat grass (*Agropyron smithii*), and Kentucky bluegrass (*Poa pratensis*). Forb species including Alfalfa (*Medicago sativa*), American Licorice (*Glycyrrhiza lepidota*), and Missouri Goldenrod (*Solidago missouriensis*) are commonly found in mine spoils in this area.

**L. Threatened and Endangered Plant Species**

No threatened or endangered plant species have been identified within the project area.

**M. Anticipated date of Reclamation**

The reclamation performance period for Buechler/Velva Project is scheduled to begin in May 2010 and be completed in October 2010.

**N. Estimated Construction Cost**

It is estimated that construction cost for the Buechler/Velva Project will be \$2,100,000.

**O. Off-site Borrow and Disposal Areas**

There will be no off-site borrow or disposal area concerns relative to this project. If off-site borrow or disposal issues arise, applicable environmental regulations will be addressed through the North Dakota Department of Health.

**P. Noise Pollution**

Project work will be conducted no closer than 5,000 feet from the nearest residential or commercial population. Noise pollution problems are not anticipated; however, if problems arise, remedial action measures will be addressed through the North Dakota Department of Health.

**Section V  
Consultations**

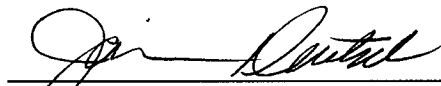
The State Historical Preservation Officer has been contacted with reference to any cultural or historical values present at or near the project site.

The United States Fish and Wildlife Service has been contacted with reference to identification of threatened or endangered animal species on the proposed project site.

The Planning and Natural Resources Division of the North Dakota Parks & Recreation Department has been contacted with reference to identification of threatened, endangered or rare plant species or communities.

A letter was also sent to the North Dakota Department of Health requesting concurrence for this project.

**Section VI  
Preparers**



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James R. Deutsch  
Director - AML Division  
North Dakota Public Service Commission

# **STANDARDIZED ENVIRONMENTAL ASSESSMENT**

Williams County Road 9 AML  
Abandoned Mine Lands Project  
ND000111  
Williams County, North Dakota

Prepared by

North Dakota Public Service Commission

In Cooperation With

United States Department of the Interior  
Office of Surface Mining Reclamation and Enforcement  
Casper Field Office

(Updated January 2010)

## **Section I Introduction**

### **A. Need for the Action**

The principal objective of the Abandoned Mine Lands Division of the North Dakota Public Service Commission regarding this project is to reclaim potentially hazardous underground mines located beneath and adjacent to Williams County Road 9 and several township roads and residential areas which are located near Williston, North Dakota.

To our knowledge there have been no instances of death or personal injury attributable to abandoned coal mines included in the 2010 Williams County Road 9 sites; however, the potential for death or injury is inherent due to the location of the abandoned mines beneath public roadways. There have been documented instances of sinkholes within the proposed project area in the past. Some have been filled in by the North Dakota Public Service Commission and some by local landowners.

### **B. Project Background**

The proposed Williams County Road 9 AML project area is located within portions of Sections 5, 6, 7, 8, 17, 18, 19, 20, and 21, T154N, R100W, and Section 36, T155N, R101W, Williams County, North Dakota.

County Road 9 provides access from Williston to the city's landfill, an active leonardite mine, Grandview Subdivision and also serves as a bus route and main thoroughfare to areas north and east of Williston, North Dakota (population 13,000).

Exploratory drilling in 1991 and 1994 was conducted along the county and township road shoulders and within Grandview Subdivision. Drilling information indicates a minimum of 4,350 linear feet of road surface within the defined project area could be undermined. Most areas of the underground mines are in various stages of collapse and upward migration to surface. Depth to voids below surface ranged from 30 feet at the north end of the proposed project area and up to 120 feet below surface towards the south end. This variation in depth to mining voids is reflected by the increase in land elevation trending to the south. The deteriorating underground coal mines below and their location adjacent to well-traveled county and township roads and residential areas present a potential hazard to the driving public.

The Williams County Road 9 AML Project is expected to be conducted in phases as funding allows. Approximately 30,000 feet were drilled and 2,500 cubic yards of grout were injected in the first phase of this project series (2006) to stabilize portions of County Road 9, 53<sup>rd</sup> Street and 53<sup>rd</sup> Lane. In 2007, Phase 2 included 34,812 feet of

rotary drilling and 5,576 cubic yards of grout was injected. In 2008, Phase 3 included 50,000 feet of rotary drilling and 3,882 cubic yards of grout was injected. In 2009, Phase 4 included 59,985 feet of rotary drilling and 8,176 cubic yards of grout was injected. The 2009 project also included some other properties in the general vicinity of Williams County Road 9. Plans for the 5<sup>th</sup> project phase include approximately 25,000 feet of rotary drilling and 1,000 cubic yards of grout.

Mining of the (average) 10 foot thick lignite seam at this project site was conducted by several medium-sized operators and large commercial operations which date back to the early 1900's up to 1930. Underground mining in other areas east of Williston was prevalent up into the 1960's. Current land use of the proposed project area is public roadway and classified as public domain. Upon completion of the reclamation project, land use will remain as public roadway. Land use in the Grandview Subdivision and other residential areas drilled will remain residential.

A public meeting was conducted on December 13, 2005, in Williston to discuss the proposed project with local residents, as well as city and county officials. All present indicated support for the proposed project. A second public meeting was held on February 7, 2008, with local property owners and any other interested parties that may be affected during Phase 3 of the project, again everyone present indicated support for the proposed project.

## **Section II**

### **Description of the Proposed Project and Alternatives**

The preferred option for reclamation is pressure grout backfilling to stabilize overburden from collapse. A grout mixture consisting of water, fine sand, Portland cement, flyash and pumping agents would be used as the backfill material.

Abandoned mine workings and rubble encountered during the exploratory drilling projects have been (and will be) cased from ground surface to the top of the voids with 3" diameter Schedule 40 PVC pipe. Casing of the holes is accomplished to allow mine inspection with the borehole camera (where conditions allow) and to protect the integrity of the borehole from formation collapse. Cased void and rubble holes will be used as injection holes into the abandoned underground mine workings.

Backfilling of the mine will commence systematically with injection holes spaced approximately every 10 linear feet along the road shoulders and around homes to the extent possible. This relatively close spacing will be required because available mine maps indicate haul tunnels within this historic mining district are typically 10 feet wide. Drill holes spaced any further than 10 feet apart may miss targeted mined workings. Due to varying degrees of collapse and void migration to surface, a pressure grout

backfill injection will be required. Some areas may require the emplacement of subsurface barrier walls to contain pumped grout materials within selected areas. However, most mined areas indicate varying magnitudes of collapse, which forms a natural barrier to control excessive grout-take. Angle drilling may be utilized if deemed necessary for mined areas directly underneath road surfaces if grout injection through rubble zones proves ineffective.

Another alternative would be gravity backfilling. Gravity backfilling has proved to be a cheaper method of mine-fill; however, gravity backfilling will not penetrate the tight rubble that has been encountered through exploratory drilling. Underground mine filling utilizing gravity-feed slurry was attempted with limited success in a number of areas of North Dakota during the 1980's demonstrating similar geological characteristics of overburden, coal thickness and room and pillar mining methods.

Another alternative would be "daylighting" or over-excavation. This process would entail excavating all overburden down to the mined coal seam and backfilling once all mining voids have been excavated. This alternative is not considered viable due to the excessive costs involved for this type of work, especially considering the overburden thickness throughout much of the project area. Also, a minimum of a 3:1 backslope would be required to safely operate equipment under this alternative and this also would prove to be unfeasible due to the location of adjacent steep drainages, as well as various buried utilities located in the area. The process of daylighting would also require the road to be temporarily re-located during reclamation. Daylighting in residential areas would require the re-location of homes and other buildings.

Another alternative would be relocating the road. This is not considered a viable option either because mine maps indicate there appears to be substantial underground mining on both sides of the road for considerable distances, and would serve to only relocate the road on other portions of underground mines. Re-locating the homes and other buildings in residential areas is not a viable option either.

The final alternative would be no action. This option does not solve the inherently dangerous AML problems that exist at the site and is not considered a viable option.

### **Section III Existing Environmental Documents**

The environmental concerns of the proposed project are addressed in an Environmental Impact Statement (EIS) prepared by the Office of Surface Mining Reclamation and Enforcement entitled "Approval of State and Indian Reclamation Program Grants Under Title IV of the Surface Mining Control and Reclamation Act of 1977": (OSM-EIS-11, November 1983). Please reference the following documents for further information.

Chapter III, Affected Environmental Rocky Mountain/Northern Great Plains Region

Section 3.5.3.2, Adverse impacts related to subsidence, pp III-29,  
Subsections 3.5.3.2.1, 3.5.3.2.2, 3.5.3.2.4, 3.5.3.3.3

Chapter IV, Environmental Consequences Rocky Mountain/Northern Great Plains Region

Section 4.3.3.3, Impacts of deep subsurface reinforcement treatment

Section 4.3.1.1, Impacts of backfilling mine openings



## **Section IV Site Specific Review**

- A. Cultural or historic resource values (the Archaeological Resources Protection Act of 1979; the Archaeological and Historic Preservation Act of 1974; the National Historic Preservation Act of 1986, as amended; the Antiquities Act of 1906, Executive Order 11593, concerning the protection and enhancement of the cultural environment; the American Indian Religious Freedom Act of 1978; the Historic Sites Act of 1935; and, OMB Circular A-102).**

Reclamation activities will be conducted in a manner that should have no significant effect on cultural or historic resources. A letter was sent to the State Historical Society of North Dakota on December 9, 2009, requesting concurrence for the proposed 2010 project. A response was received on December 15, 2009, indicating that the State Historical Society concurs with the recommendation that "No Historic Properties will be Affected".

- B. Water quality values (Clean Water Act, as amended)**

There are several drainages and the Little Muddy River located within close proximity to the reclamation site. Reclamation will be conducted in a manner that should have no significant effect on surface water quality or quantity. Groundwater can be affected by pressurized grout remote backfilling; however, water contained in abandoned underground coal mines and coal seams is of poor quality and is not generally used for home consumption. The AML Division remains in continual consultation with the North Dakota Department of Health to monitor the performance and environmental aspects of the use of flyash-grout, especially as it concerns groundwater. Seven groundwater monitoring wells were also installed in the project area. These have been quantitatively and qualitatively monitored since 2007. A letter was sent to the North Dakota Department of Health on December 9, 2009, requesting concurrence for proposed 2010 project sites. A response dated January 8, 2010, indicated concurrence that this project will not adversely affect surface waters.

- C. Wetlands values (Clean Water Act, Executive Order 11990, and Army/EPA Memorandum of Agreement (MOA) Concerning the Determination of Mitigation under the Section 404(b) (1) Guidelines)**

No reclamation activities are planned on or near wetlands within the Williams County Road 9 reclamation project area.

**D. Floodplain values (Executive Order 11988)**

No reclamation activities within the Williams County Road 9 AML project area are within an identified floodplain.

**E. Wildlife (Endangered Species Act and Fish and Wildlife Coordination Act)**

No endangered or threatened species are known to occupy the project area as described. A letter was sent to the United States Fish and Wildlife Service on December 9, 2009, requesting concurrence for proposed 2010 project sites.

**F. Prime and unique farmland values (Farmland Protection Policy Act)**

Reclamation will be conducted as to not destroy the integrity or utility of prime farmland within the proposed reclamation area. As noted previously, the Williams County Road 9 AML project area is located within the right-of-ways of County Road 9, adjacent township roads and residential areas, and reclamation efforts should have no effect on prime and unique farmland values.

**G. Recreational resource values (Wild and Scenic Rivers Act, Clean Air Act)**

There are no lands in the proposed project area classified as Wilderness Area or lands being studied for wilderness.

There are no lands in the proposed project area identified as areas of critical environmental concern.

There are no lands in the proposed project area included in the Wild and Scenic Rivers category.

There are no parks or areas of critical ecological or aesthetic concern found in the proposed project area.

**H. Air quality (Clean Air Act)**

The proposed project area is not in or near a Class I air quality region. There are no conditions on the existing site of the proposed project that affect air quality of the nearby area.

## **I. Socioeconomic factors**

The Williams County Road 9 AML project area consists of public roads, road right-of-ways, and residential areas near the town of Williston, North Dakota and factors such as noise, traffic control and dust suppression will be addressed in the Information for Bidders (IFB) package.

## **J. Political factors**

Williams County, North Dakota has zoning jurisdiction over 70% of the project area and Stony Creek Township and Missouri Ridge Township have zoning jurisdiction over the remaining 30% of real property. Correspondence between the North Dakota Public Service Commission and all governing entities is ongoing and will continue throughout the duration of the project. City, township and county officials have expressed support in reclamation of the proposed project.

Public meetings were held December 13, 2005 and February 7, 2008, to discuss proposed projects with local residents, government officials, and the general public.

## **K. Existing vegetative cover**

Existing vegetation along the road ditches and residential areas consists of introduced species. This vegetation includes species such as Fairway crested wheat grass, Smooth brome grass, Kentucky bluegrass, and yellow sweet clover.

## **L. Threatened and endangered plant species**

To the best of our knowledge, no threatened or endangered plant species have been identified within the project areas. The only federally-listed threatened or endangered plant in North Dakota is the Western Prairie Fringed Orchid (*Platanthera praeclara*). Known locations of this plant are within moist, tall grass prairie and sedge meadows of the Sheyenne National Grasslands in the southeastern corner of the state. This plant has not been seen and is not likely to inhabit the proposed project areas. U.S. Fish & Wildlife Service, Bismarck, ND (North Dakota's Federally Listed Endangered, Threatened and Candidate Species - 1995) listed several other former candidate species which remain of management concern. These include Hayden's Yellow-Cress (*Rorippa calcina*), Wolf's Spike-Rush (*Eleocharis wolffii*), Dakota Wild Buckwheat (*Eriogonum visherii*) and Handsome Sedge (*Carex formosa*). None of these species are likely to be found or disturbed within the 2010 Williams County 9 Phase 5 project site. A letter was sent to the Natural Heritage Program of the North Dakota Parks and Recreation Department on December 9, 2009, requesting concurrence for proposed

project sites. A response was received on December 31, 2009 recommending that any impacted areas be revegetated with species native to the project area.

**M. Anticipated dates of reclamation**

Exploratory drilling for this project was conducted in 1991-95. The first phase of this reclamation project was conducted in 2006. The second phase of the reclamation was conducted in 2007. The third phase of the reclamation was conducted in 2008. The fourth phase of the reclamation was conducted in 2009. The fifth phase of work is expected to be completed in 2010. Subsequent work may be conducted as funding levels and need arises over the next several years.

**N. Estimated cost of reclamation**

The contractual cost for the 2006 Williams County Road 9, Phase 1 Project was \$358,621. The contractual cost for the 2007 Williams County Road 9, Phase 2 Project was \$664,155. The contractual cost for the 2008 Williams County Road 9, Phase 3 Project was \$655,715. The Williams County 9, Phase 4 Project is not complete, but the contractual cost is \$1,057,000. The cost of the Williams County Road 9, Phase 5 Project is estimated to be \$270,000. The estimated cost for the entire Williston/Williams County Road 9 project series is approximately \$3 million.

**O. Off-site borrow and disposal areas**

If off-site borrow or disposal issues arise, applicable environmental regulations will be addressed through the North Dakota Department of Health and Consolidated Laboratories.

**P. Noise Pollution**

Noise Pollution is not anticipated. Should noise pollution problems arise, the North Dakota Health Department will be consulted for remedial action.

**Q. Environmental Justice Policy**

Construction work may result in a slight increase in employment and revenues, but no significant direct or indirect impact on minority or low-income populations is expected.

## **Section V Consultations**

### **1. U.S. Fish and Wildlife Service**

A letter was sent to the United States Fish and Wildlife Service on December 9, 2009 requesting concurrence for the proposed 2010 project.

### **2. State Historical Preservation Officer**

A letter was sent to the State Historical Society of North Dakota on December 9, 2009 requesting concurrence for the proposed 2010 project.

### **3. N.D. Department of Health**

A letter was sent to the North Dakota Department of Health on December 9, 2009 requesting concurrence for the proposed 2010 project

### **4. N.D. Parks and Recreation**

A letter was sent to the North Dakota Parks and Recreation Department on December 9, 2009 requesting concurrence for the proposed 2010 project.

## **Section VI Preparers**



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James R. Deutsch  
Director - AML Division  
North Dakota Public Service Commission

# **STANDARDIZED ENVIRONMENTAL ASSESSMENT**

Beulah/Zap AML Area  
ND000014  
Mercer County  
North Dakota

Prepared by

North Dakota Public Service Commission

In Cooperation With

United States Department of the Interior  
Office of Surface Mining Reclamation and Enforcement  
Casper Field Office

(Updated January 2010)

## **Section I Introduction**

### **A. Need for the Action**

The principal objective of the Abandoned Mine Lands Division of the North Dakota Public Service Commission regarding this project is to reclaim potentially hazardous portions of underground mines located beneath and adjacent to North Dakota Highway 200 and several township roads and residential areas which are located near Beulah and Zap, North Dakota.

To our knowledge there have been no instances of death attributable to the abandoned mines in the Beulah/Zap Abandoned Mine Lands (AML) Area. However, the presence of abandoned surface and underground mines are a serious hazard to the public and landowners. Several instances of damage to commercial and residential structures, farm equipment and loss of livestock have resulted from abandoned mine land problems.

### **B. Project Background**

This Environmental Assessment (EA) for the Beulah/Zap Mining Area is a consolidation of several previous EA's for individual project sites within the area. It also has been modified periodically to add additional acreage where abandoned mine lands have presented hazards. The Beulah/Zap AML Area includes portions of Townships T144N, R87W, T144N, R88W, and T144N, R89W in Mercer County, as illustrated on the map at the end of this document. More than fifteen major reclamation projects and several smaller emergency, maintenance, and exploratory drilling projects have been conducted by the North Dakota Public Service Commission, Abandoned Mine Lands (AML) Division, within this area. These projects have included regrading subsidence features and remote backfilling abandoned underground mine workings. These projects were conducted near roads, residential and commercial property, and on agricultural lands. Although much work has been done to remedy AML problems within this area, there are more AML problems and, consequently, work remains to be done within the Beulah/Zap AML Area.

The Beulah/Zap AML Area is located near the cities of Beulah (population 3363) and Zap (287). More than 50 coal mines have been located within 20 miles of Beulah and Zap, making this one of the most heavily mined areas in the state. The area immediately around Beulah is affected principally by one large abandoned underground coal mine, the Knife River Underground Mine. This mine began as the Black Diamond Mine around 1915 and continued under several different owners as the Beulah Coal Mine and the Knife River Coal Mine. In 1953, the underground mining operation was

abandoned and the Knife River Coal Mine continued as a surface (strip) mine in locations both north and south of Beulah.

The Knife River Underground Mine operated beneath an area including approximately a dozen square miles. There were also several other small local mines, but most of the AML problems in and around Beulah are a result of subsidence of the Knife River underground mine. The mine had fairly shallow overburden, ranging from 40 to 100 feet, and a relatively thick coal seam of up to 20 feet. Subsidence of the mine workings have frequently resulted in sudden collapse of deep sinkholes with steep sides that create a severe hazard to the public and landowners. In fact, sinkholes have surfaced directly underneath residences and businesses in Beulah. Some of the earliest AML reclamation work was conducted in the early 1980s to stabilize undermined residences at the Sun Valley Trailer Court in Beulah. Several emergency projects have been conducted near Beulah to fill dangerous sinkholes that collapsed near commercial buildings, homes, city streets and highways. Some of these include a 1993 mine collapse resulting in a twenty-foot sinkhole underneath the Black Diamond Lounge, a ten-foot deep sinkhole in the front yard of Mrs. Della Bauer in Beulah in 1998, and a deep sinkhole that 'swallowed' a tractor parked in a machine shed near Beulah in 2001. Emergency projects were conducted in 1997, 2004, and 2009 to fill dangerous sinkholes that collapsed in the yard of Curt Michaelson, who lives north of Beulah.

The 1997 Beulah/Zap Phase I and 1998 Beulah/Zap Phase II Projects were conducted near the intersections of Highways 49 and 200, about a mile north of Beulah. These were pressurized grout remote backfilling projects in which a combined total of nearly 13,000 cubic yards of grout were injected into collapsing underground mined workings. A commercial building, containing three retail businesses, several occupied mobile homes, and heavily traveled highways are located at this site. The 1999 Beulah/Zap Phase III Project was conducted near Radio Station KHOL and along Mercer County Highway 21 in Section 18, T144N, R87W and Section 13, T144N, R88W. Exploratory drilling was also conducted within the City of Beulah. All three of these project phases were designed to stabilize the surface from mine-related subsidence and thereby protect the public from the effects of underground mine collapse.

Another abandoned mine located in the NW¼ of Section 25, T144N, R88W, within the City of Beulah is known by long time residents as the Schmidt Mine. No mine maps are available for this mine. Information from the 1918 Report of the State Engineer suggests that the mine was called the Standard Coal Mine, operated by George Schmidt in 1916-1917. Several sinkholes have surfaced in this area. One sinkhole surfaced in the front yard of the Della Bauer residence at 408 1<sup>st</sup> Avenue Northeast in Beulah and this was repaired November 25, 1998 under the State's Emergency Program. Exploratory drilling was conducted along city streets in 1991 and additional drilling was conducted in yards and near houses in 1999. The subsidence features and drilling information provided evidence that underground mined workings were a potential danger to the public in this residential neighborhood within the City of Beulah. The 2000 Beulah/Zap Phase IV Project was a pressurized grout remote backfilling project to



stabilize the dangerous collapsing underground mined working in a residential neighborhood and beneath a 500-foot segment of Mercer County Highway 21 near KHOL Radio.

During the 2001 Beulah/Zap Phase V Project, grout was injected into mined workings beneath ND Highway 200 and Mercer County Highway 21. The 2002 Beulah/Zap Phase VI and 2003 Beulah/Zap Phase VII Projects were continuations of subsurface reclamation beneath the right-of-ways of ND Highway 200 north of Beulah. Additional drilling conducted on Mercer County Highway 13, south of Zap, revealed that an additional segment of that roadway is undermined. Large and dangerous sinkholes were filled on and near the Mercer County Highway 13 right-of-way in 1995 and 2001.

Several abandoned surface and underground coal mines have been located near Zap. These include Zap Collieries, Zap Coal Company, Lucky Strike Mine, Dry Flint Coal Company, and others. In the 2004, 2005 and 2006 Beulah/Zap Phases VIII through X Projects, approximately 10,884 cubic yards (19,000 tons) of grout was injected into collapsing mined workings to stabilize a segment of Mercer County Highway 13 about 1 mile south of Zap. Work was not completed on Mercer County Highway 13 and will need to be continued in subsequent phases of this project series. Reclamation work along ND Highway 200 and several other secondary roads near Beulah and near the Curt Michaelson farmstead is also pending.

Two operating lignite mines, the Dakota Westmoreland Corporation's Beulah Mine, and the Coteau Properties Company's Freedom Mine are located near Beulah and Zap. North American Coal Company's Indian Head Mine was located near Zap but mining has ceased, reclamation has been completed and all permitted areas have been bond released.

Current land uses in the Beulah/Zap AML Area include residential, commercial, agricultural, wildlife management areas and roadways. Post-construction land uses in the area have and will continue to remain unchanged.

## **Section II**

### **Description of the Proposed Project and Alternatives**

AML Reclamation work has been done at several sites within the Beulah/Zap AML Area. Most of this work included remote backfilling underground mine workings to stabilize the surface from the dangerous effects of mine collapse. Surface grading of subsidence features has also been conducted extensively in the past and is expected to continue in this area for the foreseeable future. The major reclamation emphasis in the future will be the protection of residential areas, businesses, public roads and farmsteads from the effects of subsidence and collapse of underground mine workings. Exploratory drilling has been conducted to determine the extent and condition of underground workings beneath roads and structures.

Plans for remaining phases of the Beulah/Zap project series include pressurized grout remote backfilling and associated work near Beulah and Zap at the following locations all in Mercer County:

- Mercer County Highway 13 approximately one mile south of Zap in Sections 23 and 26, T144N, R89W;
- ND Highway 200 right-of-way extending eastward approximately 1¼ miles from the intersection of Highways 200 and 49, along the lines between Sections 12 and 13 T144N, R88W, and Sections 7 and 18, T144N, R87W;
- Mercer County Highway 21 north of the junction with ND Highway 200 along the east edge of Section 12, T144N, R88W;
- 60<sup>th</sup> Avenue Southwest between Sections 12, T144N, R88W, and Section 7, T144N, R87W; and,
- The Curt Michaelson Farmstead in the NE¼ of Section 12, T144N, R88W.

The 2010 Beulah/Zap Phase XI AML Project will be a continuation of work performed in 2004, 2005 and 2006 to stabilize undermined segments of public roads near Beulah and Zap.

The general procedure for reclamation of collapsing underground mined workings in “high use” areas includes rotary drilling and pressurized grout remote backfilling. Drilled holes that intercept mining voids or rubble will be cased from ground surface to the top of the void/rubble zone with 3" Inside Diameter (I.D.) Schedule 40 PVC pipe. Casing of the holes allows mine inspection with the borehole camera, and protects the integrity of the borehole from formation failure. Cased void holes may be used as injection holes for pressure grout injection.

The preferred method for reclamation of underground mined workings beneath roads and structures is pressurized grout remote backfilling. Pressure grout backfilling is a method of filling in the mine rooms and tunnels with a grout mixture of cement, flyash, water, sand and various other admixtures. Grout is pumped under pressure, through

drilled holes, directly into the mine workings. When injected, this material sets up and stabilizes the overburden to prevent collapse of the mine workings.

Backfilling of the mine usually commences systematically with injection holes spaced approximately every ten feet depending on mine specific conditions. Drilling rigs with directional drilling capabilities may be utilized for inaccessible areas such as under houses, roadways and miscellaneous utilities. The relatively close spacing of drill holes is essential because accurate mine maps are not available for all areas. Haul tunnels in this mining area were typically ten feet wide. Drill holes spaced any more than ten feet apart may miss the target mined workings. It is anticipated that confirmation holes will be cored between the injection holes.

Pressurized grout remote backfilling is the preferred method because when mine workings have collapsed, pressure is required to penetrate the rubble and differential void levels.

A second option is gravity backfilling. Gravity backfilling consists of pouring a sand and water slurry from cement trucks down drilled holes. This method works well when mine voids are intact at the mine level. However, gravity backfilling will not penetrate the rubble and differential levels of mine workings that were encountered during exploratory drilling at this site.

A third alternative is “daylighting” or excavation of all underground mine workings. This would entail excavating all overburden down to the mined coal seam and backfilling it after all mining voids have been excavated. This method is not considered practical due to the extremely high cost of temporary relocation of roads and structures and of deep excavation over a large area.

Other options include property buy-out, relocation or condemnation by a local political subdivision with demolition or removal of existing structures and utilities and relocation of the roads. Fencing would also be necessary to restrict access by pedestrians.

Another option would be no action. These last options do not solve the AML problems and therefore, are not considered viable options.

### **Section III**

## **Existing Environmental Documents**

OSM-EIS-11. Approval of State and Indian Reclamation Program Grants Under Title IV of the Surface Mining Control and Reclamation Act of 1977 was published by the Office of Surface Mining in November 1983. This EIS describes and analyzes the environmental impacts that were expected to result from approval of State or Tribal Grants. It focuses on the adverse and/or beneficial impacts and standard reclamation activities associated with eight major categories of abandoned coal mine problems in the United States.

The environmental concerns of the proposed project are addressed in an Environmental Impact Statement (EIS) prepared by the Office of Surface Mining Reclamation and Enforcement entitled "Approval of State and Indian Reclamation Program Grants Under Title IV of the Surface Mining Control and Reclamation Act of 1977": (OSM-EIS-11, November 1983). Please reference the following documents for further information.

Chapter III, Affected Environmental Rocky Mountain/Northern Great Plains Region

Section 3.5.3.2, Adverse impacts related to subsidence, PP III-29, Subsections 3.5.3.2.1, 3.5.3.2.2, 3.5.3.2.4, 3.5.3.3.3,

Chapter IV, Environmental Consequences Rocky Mountain/Northern Great Plains Region.

Section 4.3.3.3, Impacts of deep subsurface reinforcement treatment.

## **Section IV Site Specific Review**

**A. Cultural or historic resource values (the archaeological Resources Protection Act of 1979; the Archaeological and Historic Preservation Act of 1974; the National Historic Preservation Act of 1986, as amended; the Antiquities Act of 1906, Executive Order 11593, concerning the protection and enhancement of the cultural environment; the American Indian Religious Freedom Act of 1978; the Historic Sites Act of 1935; and OMB Circular A-102).**

Reclamation activities will be conducted in a manner that should have no significant effect on cultural or historic resources. A letter was sent to the State Historical Society of North Dakota on December 9, 2009, requesting concurrence for the proposed 2010 project. A response was received on December 15, 2009 indicating that the State Historical Society concurs with the recommendation that "No Historic Properties will be Affected".

**B. Water quality values (Clean Water Act, as amended)**

There are several streams, drainages, wetlands, stockponds, or other bodies of water on or near the Beulah/Zap AML Area. Reclamation will be conducted in a manner that should have no significant effect on surface water quality or quantity. Ground water can be affected by pressurized grout remote backfilling. However, water contained in abandoned underground coal mines and coal seams is of poor quality and is not generally used for human consumption. The AML Division remains in continual consultation with the North Dakota Department of Health to monitor the performance and environmental aspects of the use of flyash-grout, especially as it concerns groundwater. In the summer of 2000, the AML Division collected and analyzed flyash-grout samples at project sites near Dickinson and Beulah. Ground water samples were also collected and analyzed in 2000, 2001, and 2002 at the Beulah project sited. These data were incorporated into a report to the North Dakota Health Department. A letter was sent to the North Dakota Department of Health on December 9, 2009 requesting concurrence for proposed 2010 project sites. A response dated January 8, 2010, indicated concurrence that this project will not adversely affect surface water.

**C. Wetlands values (Clean Water Act, Executive Order 11990, and Army/EPA Memorandum of Agreement (MOA) Concerning the Determination of Mitigation under the Section 404(b) (1) Guidelines)**

No reclamation activities are planned on or near wetlands within the Beulah/Zap AML reclamation project area.

**D. Floodplain values (Executive Order 11988)**

No planned project sites in the Beulah/Zap AML Area are within an identified floodplain.

**E. Wildlife (Endangered Species Act and Fish and Wildlife Coordination Act)**

No endangered or threatened species are known to occupy the project area as described. A letter was sent to the United States Fish and Wildlife Service on December 9, 2009, requesting concurrence for proposed 2010 project sites.

**F. Prime and unique farmland values (Farmland Protection Policy Act)**

There are prime farmlands within the Beulah/Zap AML Area. Reclamation will be conducted as to not destroy the integrity or utility of prime farmland.

**G. Recreational resource values (Wild and Scenic Rivers Act, Clean Air Act)**

There are no lands in the Beulah/Zap AML Area classified as Wilderness Areas or lands being studied for wilderness designation.

There are no lands in this area identified as areas of critical environmental concern.

There are no lands in this area included in the Wild and Scenic Rivers category.

There are no parks or areas of critical ecological or aesthetic concern in this area.

**H. Air quality (Clean Air Act)**

The Beulah/Zap AML Area is not in or near a Class I air quality region.

**I. Socioeconomic factors**

Factors such as noise, traffic control and dust suppression will be addressed in the Information for Bidders packages and may be a contingency bid item.

Commercial, residential, farming and ranching operations are prominent proximal to the project sites. Reclamation will be conducted in a manner that minimizes any disruption to these socioeconomic factors.

## **J. Political factors**

Portions of the Beulah/Zap AML Area are under zoning jurisdictions of Mercer County, the City of Beulah, several township authorities, and the State of North Dakota, as well as private ownership. Meetings between the North Dakota Public Service Commission and all governing and private entities are ongoing and will continue throughout project(s) completion. Public meetings were held on November 25, 1996, December 9, 1999 and January 28, 2009, in Beulah to discuss reclamation plans in the Beulah/Zap AML Area. Notices were mailed to landowners, governmental authorities, and other interested parties; and public service announcements were made in local newspapers and on radio stations.

## **K. Existing Vegetative Cover**

Existing vegetation varies with land use within the Beulah/Zap AML Area. It includes cropland, tame grass and legume pastures, native grasslands, road ditches, driveways, parking lots and yards. Cropland and tame grasses are predominant and include wheat, oats, barley, corn, sunflowers, alfalfa, crested wheatgrass, smooth brome grass. Shelterbelts are commonly located within cropland and may contain several tree and shrub species including Siberian Elm, Russian Olive, Colorado Blue Spruce, Caragana, and others. Native grasslands may include species such as wheatgrasses, green needlegrass, blue grama, and big bluestem as well as forbs such as western snowberry, buffaloberry, chokecherry and wild plum. Most of the planned reclamation work will be done in parking lots, beneath buildings, and on road right-of-ways.

## **L. Threatened and Endangered Plant Species**

To the best of our knowledge, no threatened or endangered plant species have been identified within the project area. Letters requesting consultation regarding the presence of known rare, threatened or unique plant species in the project area have been sent to the Natural Heritage Program of the North Dakota Parks and Recreation Department. The most recent one sent on December 9, 2009, concerned reclamation at several areas near Beulah and Zap. The only federally-listed threatened or endangered plant in North Dakota is the Western Prairie Fringed Orchid (*Platanthera praeclara*). Known locations of this plant are within moist, tall grass prairie and sedge meadows of the Sheyenne National Grasslands in the southeastern corner of the state. This plant has not been seen and is not likely to inhabit the Beulah/Zap AML Area. U.S. Fish & Wildlife Service, Bismarck, ND (North Dakota's Federally Listed Endangered, Threatened and Candidate Species - 1995) listed several other former candidate species which remain of management concern. These include Hayden's Yellow-Cress (*Rorippa calcina*), Wolf's Spike-Rush (*Eleocharis wolfii*), Dakota Wild Buckwheat (*Eriogonum visherii*) and Handsome Sedge (*Carex formosa*). None of these species has a present or historically recorded range within the Beulah/Zap AML Area.

#### **M. Anticipated dates of Reclamation**

Reclamation within the Beulah/Zap AML Area will probably continue for many years. More than 15 major projects, at a cost of over \$7 million have been conducted near Beulah. By the year 2006, ten phases of the present Beulah/Zap project had been completed. Plans have been made for Phase 11 for the 2010 construction season and it is likely that additional phases will be needed.

#### **N. Estimated Construction Cost**

Over \$7 million of reclamation work has been completed within the Beulah/Zap AML Area and it is anticipated that additional phases could require several million dollars.

#### **O. Off-site Borrow and Disposal Areas**

If off-site borrow or disposal issues arise, applicable environmental regulations will be addressed through the North Dakota Department of Health and Consolidated Laboratories.

#### **P. Noise Pollution**

Project work may be conducted very near occupied dwellings, businesses, and roadways. If noise pollution problems are encountered, remedial action measures will be addressed through the North Dakota Department of Health and Consolidated Laboratories.

#### **Q. Environmental Justice Policy**

Construction work may result in a slight increase in employment and revenues, but no significant direct or indirect impact on minority or low-income populations is expected.



## **Section V Consultations**

### **1. U.S. Fish and Wildlife Service**

A letter was sent to the United States Fish and Wildlife Service on December 9, 2009 requesting concurrence for the proposed 2010 project.

### **2. State Historical Preservation Officer**

A letter was sent to the State Historical Society of North Dakota on December 9, 2009 requesting concurrence for the proposed 2010 project.


### **3. North Dakota Parks and Recreation Department**

A letter was sent to the North Dakota Parks and Recreation Department on December 9, 2009 requesting concurrence for the proposed 2010 project.

### **4. North Dakota Department of Health**

A letter was sent to the North Dakota Department of Health on December 9, 2009 requesting concurrence for the proposed 2010 project.

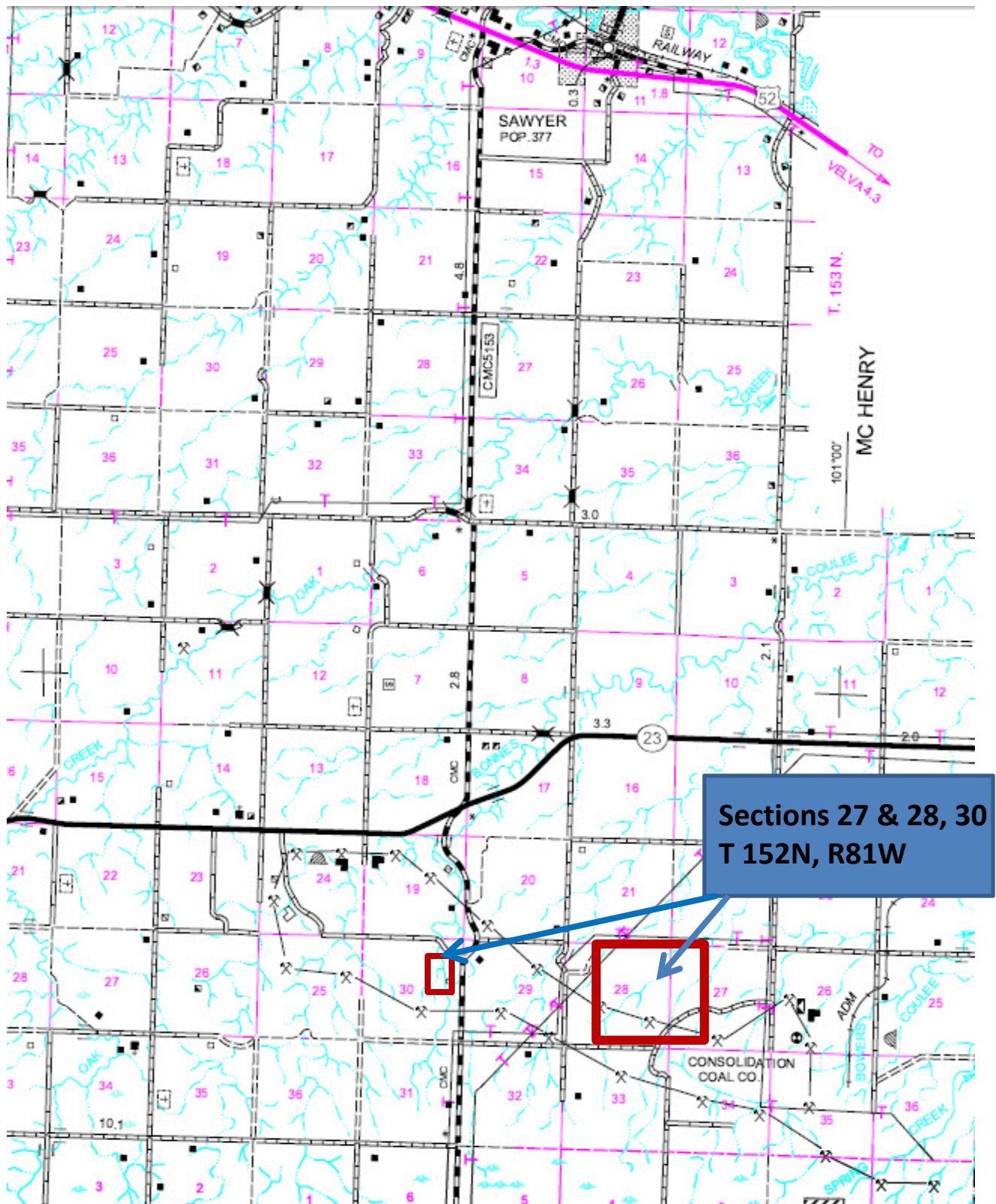
## **Section VI Preparers**



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James R. Deutsch  
Director - AML Division  
North Dakota Public Service Commission

# 2010 Buechler/Velva Project Area General Location

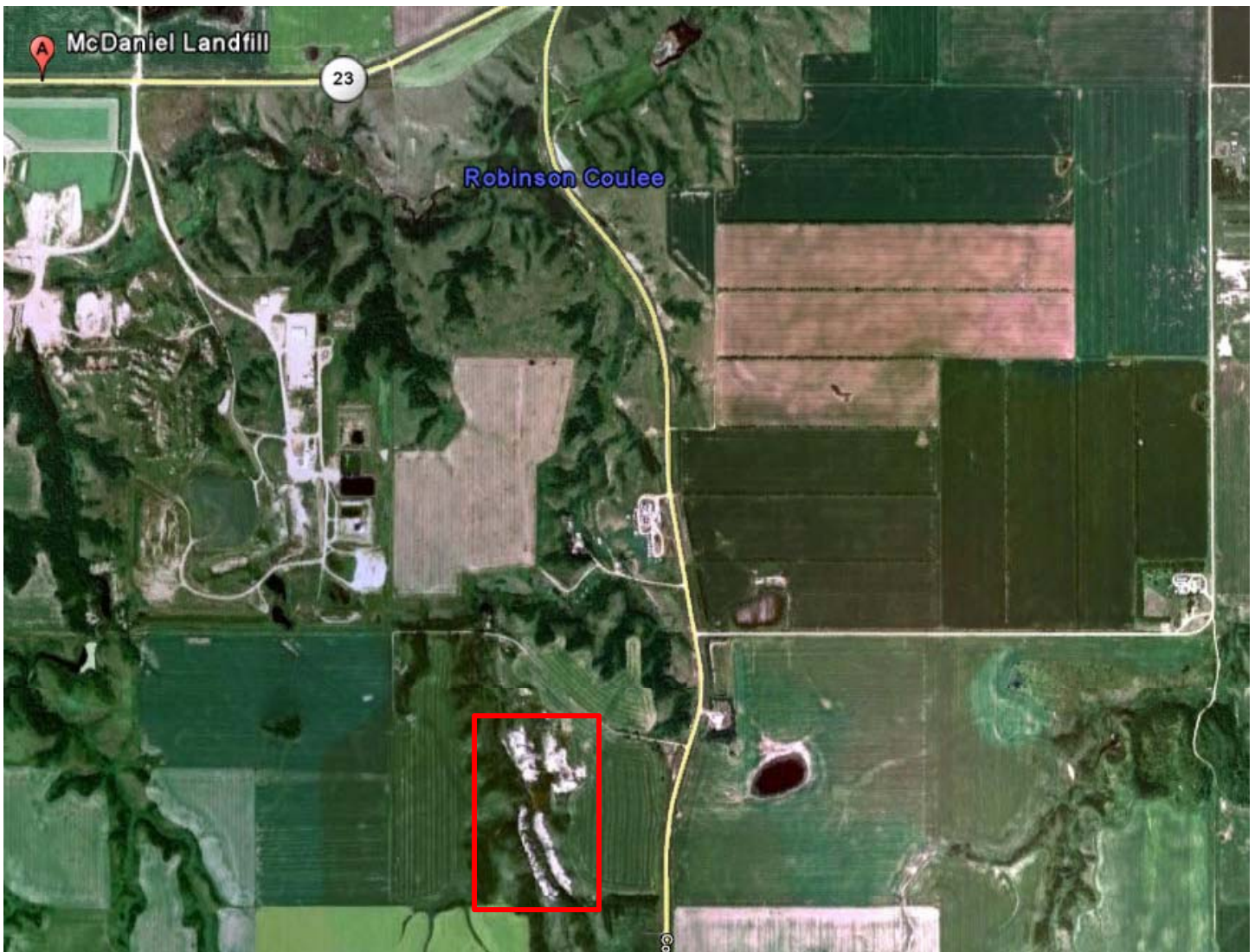




**2010 Buechler/Velva, Approximate Project Survey Area  
Section 28 and Portion of Section 27, T152N, R81W, Ward County**



**2010 Buechler-Velva, Approximate Project Survey Area  
NE ¼ Section 30, T152N, R81W, Ward County, “Vix Pit” Area**

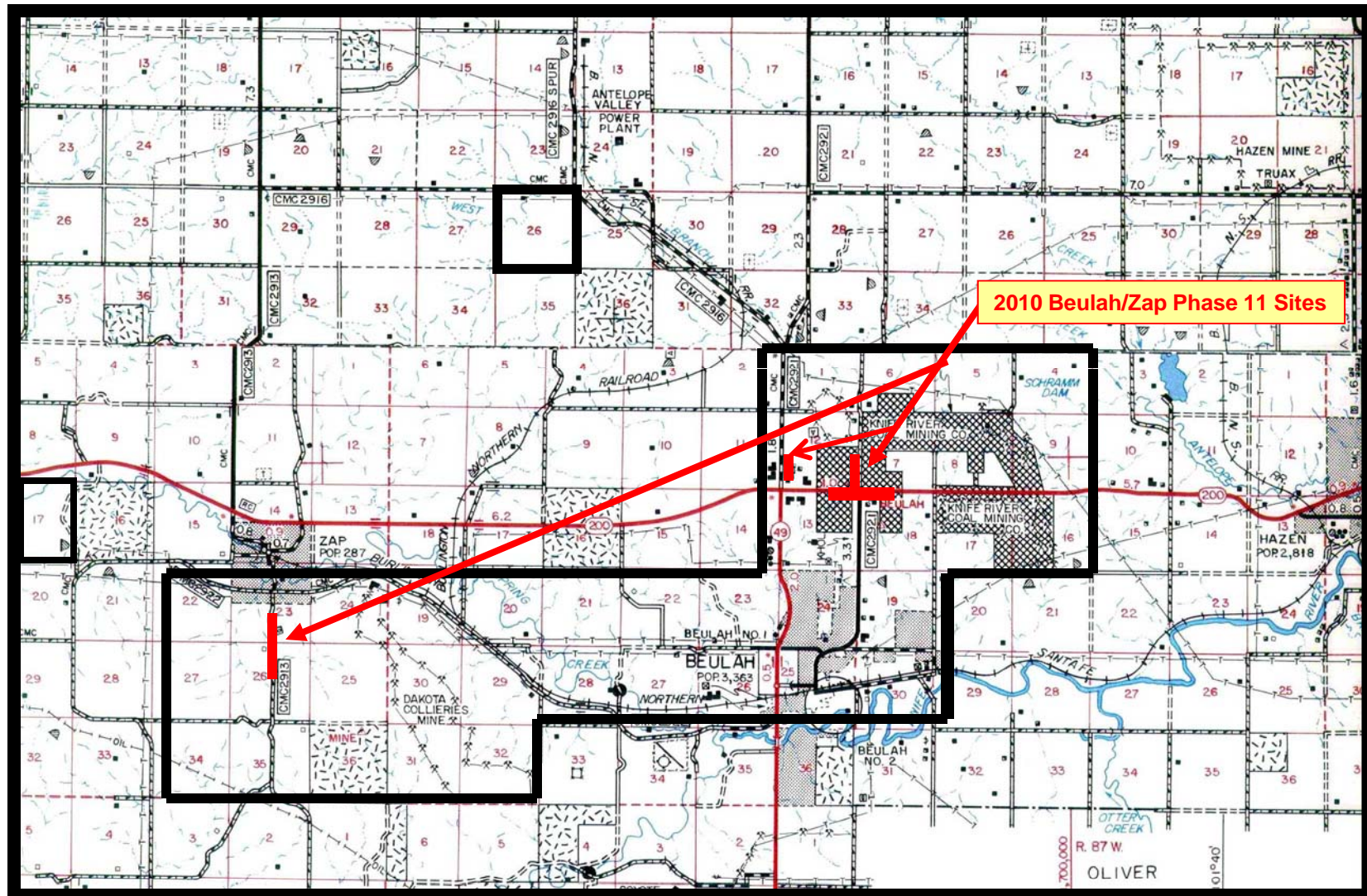




**Dorothy Lynch  
Farmstead**



## Beulah/Zap AML Area and Anticipated 2010 Project Sites





# Public Service Commission

## State of North Dakota

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### COMMISSIONERS

Kevin Cramer  
Tony Clark  
Brian P. Kalk

Executive Secretary  
Darrell Nitschke

600 E. Boulevard Ave. Dept 408  
Bismarck, North Dakota 58505-0480  
Web: [www.nd.gov/psc](http://www.nd.gov/psc)  
E-mail: [ndpsc@nd.gov](mailto:ndpsc@nd.gov)  
Phone 701-328-2400  
Toll Free 1-877-245-6685  
Fax 701-328-2410  
TDD 800-366-6888 or 711

December 9, 2009

Susan Quinnell  
State Historical Society of North Dakota  
612 East Boulevard Avenue  
Bismarck, ND 58505-0830

Dear Ms. Quinnell:

The Public Service Commission is planning reclamation activities in 2010 on the Buechler/Velva, Williams County Road 9 and Beulah/Zap Abandoned Mine Lands (AML) Sites. Work at the Williams County Road 9 and Beulah/Zap project sites are continuations of previous reclamation work. Although no reclamation has been conducted on the specific pits at the Buechler/Velva sites, previous work has been done within the Buechler problem area. These projects will be conducted by contractors selected through competitive bidding.

The 2010 Buechler/Velva Project is located in Sections 27, 28, and 30, T152N, R81W, in Ward County, North Dakota (see maps). These abandoned surface coal mine sites contain hazardous mine pits with steep highwalls. The plan of action is to backfill hazardous pits and highwalls with material from nearby spoil piles. Total surface area to be affected at this project location in 2010 will be approximately 150 acres, all of which were previously disturbed by surface coal mining. Areas affected by this project will be reseeded with locally adapted species native to western North Dakota. No pit dewatering is planned and all runoff from affected areas will flow into mine pits.

The 2010 Williams County Road 9 Project is located along Williams County Road 9, township roads and residential areas in portions of Sections 7, 8, 16, 17, 18, 19, 20 and 21, T154N, R100W, in Williams County near Williston (see map). The 2010 Beulah/Zap Project is located in residential areas and along public roads in Sections 7 and 8, T144N, R87W, Sections 12 and 13, T144N, R88W, and Sections 23 and 26, T144N, R89W, in Mercer County, North Dakota (see map). Residential areas and roads at these project sites are underlain by abandoned underground mines. The plan of action is to drill holes into the underground mine and, if necessary, pump cementitious grout through drilled holes into abandoned underground mined workings to help stabilize the surface from future mine collapse. The combined total area of disturbance in 2010 is expected to be twenty acres or less at all sites and surface disturbance will be fairly minimal.

As part of the grant application process, our office requests concurrence that the proposed reclamation work will not adversely affect any historical or archaeological resources. We would appreciate your review and concurrence for the work proposed at these sites. Please reply regarding these proposed projects by January 20, 2010.

Attached are maps showing general locations of these proposed reclamation projects. Thank you for your assistance in this matter. If you have any questions or need more information, please contact me at [wdodd@nd.gov](mailto:wdodd@nd.gov) or 701.328.4101.

Sincerely,

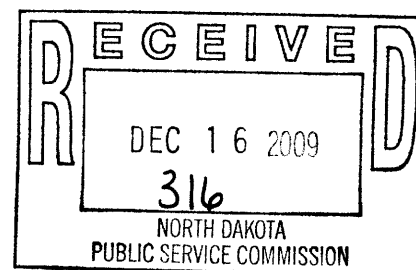
A handwritten signature in black ink that reads "William E. Dodd". The signature is written in a cursive style with a large, stylized "W" and "D".

William E. Dodd,  
Assistant Director  
Abandoned Mine Lands Division





**STATE  
HISTORICAL  
SOCIETY  
OF NORTH DAKOTA**



John Hoeven  
*Governor of North Dakota*

December 15, 2009

**North Dakota  
State Historical Board**

Chester E. Nelson, Jr.  
*Bismarck - President*

Gereld Gerntholz  
*Valley City - Vice President*

Richard Kloubec  
*Fargo - Secretary*

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*New Town*

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Tourism Division*

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Douglass Prchal  
*Director  
Parks and Recreation  
Department*

Francis Ziegler  
*Director  
Department of Transportation*

Merlan E. Paaverud, Jr.  
*Director*

*Accredited by the  
American Association  
of Museums*

Mr. William E. Dodd  
Assistant Director  
Abandoned Mines Lands Division  
600 East Boulevard Avenue Dept 408  
Bismarck ND 58505-0480

**ND SHPO REF: 10-0348 Three projects for 2010 reclamation activities  
Buechler/Velva portions of [T152N R81W Sections 27, 28, 30] Ward County  
Williams County Road 9 Project in portions of [T154N R100W Sections 7, 8,  
16, 17, 18, 19, 20, 21]  
Beulah/Zap Project in portions of [T144N R87W Sections 7 and 18] Mercer  
County, North Dakota**

Dear Mr. Dodd,

We reviewed ND SHPO REF: 10-0348 Three projects for 2010 reclamation activities, as detailed above. We concur with a "No Historic Properties Affected" determination, provided the projects are of the nature specified and in the mapped locations.

Thank you for the opportunity to review these projects. If you have any questions please contact Susan Quinnell, Review and Compliance Coordinator at (701) 328-3576, e-mail [squinnell@nd.gov](mailto:squinnell@nd.gov)

Sincerely,

Merlan E. Paaverud, Jr.

State Historic Preservation Officer (North Dakota)  
and  
Director  
State Historical Society of North Dakota



# Public Service Commission

## State of North Dakota

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### COMMISSIONERS

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Phone 701-328-2400  
Toll Free 1-877-245-6685  
Fax 701-328-2410  
TDD 800-366-6888 or 711

December 9, 2009

Mr. Dennis Fewless,  
Director of Water Quality  
North Dakota Department of Health  
Gold Seal Center  
918 East Divide Avenue  
Bismarck, ND 58501-1947

Dear Mr. Fewless:

The Public Service Commission is planning reclamation activities in 2010 on the Buechler/Velva, Williams County Road 9 and Beulah/Zap Abandoned Mine Lands (AML) Sites. Work at the Williams County Road 9 and Beulah/Zap project sites are continuations of previous reclamation work. Although no reclamation has been conducted on the specific pits at the Buechler/Velva sites, previous work has been done within the Buechler problem area. These projects will be conducted by contractors selected through competitive bidding.

The 2010 Buechler/Velva Project is located in Sections 27, 28, and 30, T152N, R81W, in Ward County, North Dakota (see maps). These abandoned surface coal mine sites contain hazardous mine pits with steep highwalls. The plan of action is to backfill hazardous pits and highwalls with material from nearby spoil piles. Total surface area to be affected at this project location in 2010 will be approximately 150 acres, all of which were previously disturbed by surface coal mining. Areas affected by this project will be reseeded with locally adapted species native to western North Dakota. No pit dewatering is planned and all runoff from affected areas will flow into mine pits.

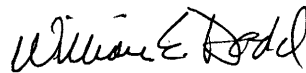
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disturbance in 2010 is expected to be twenty acres or less at all sites and surface disturbance will be fairly minimal.

As part of the grant application process, our office requests concurrence that the proposed reclamation work will not adversely affect water or public health resources. We would appreciate your review and concurrence for the work proposed at these sites. Please reply regarding these proposed projects by January 20, 2010.

Attached are maps showing general locations of these proposed reclamation projects. Thank you for your assistance in this matter. If you have any questions or need more information, please contact me at [wdodd@nd.gov](mailto:wdodd@nd.gov) or 701.328.4101.

Sincerely,

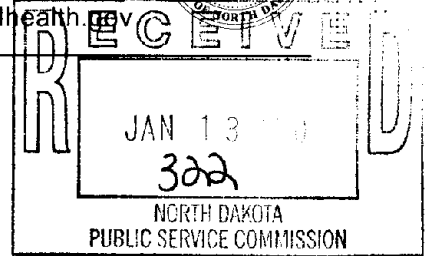
A handwritten signature in black ink, appearing to read "William E. Dodd". The signature is fluid and cursive, with the first name "William" and last name "Dodd" clearly legible.

William E. Dodd,  
Assistant Director  
Abandoned Mine Lands Division



**NORTH DAKOTA**  
DEPARTMENT of HEALTH

ENVIRONMENTAL HEALTH SECTION  
Gold Seal Center, 918 E. Divide Ave.  
Bismarck, ND 58501-1947  
701.328.5200 (fax)  
www.ndhealth.gov



January 8, 2010

William Dodd, Assistant Director  
Abandoned Mine Lands Division  
Public Service Commission  
600 E. Boulevard Ave  
Bismarck, ND 58505

RE: Consultation Request for 2010 Abandoned Mine Reclamation Projects

Dear Mr. Dodd:

We appreciated the opportunity to review the proposed abandoned mine reclamation projects described in your December 9, 2009 letter.

The proposed work at the Buechler/Velva project would not require a NDPDES permit for stormwater runoff from the construction disturbance and construction dewatering. As described in your letter no pit dewatering is planned and runoff from the work area would be contained onsite in the mine pits.

The Williams County Road 9 Project and Beulah/Zap Project involving abandon underground mine work would not require NDPDES permits. In addition, we believe that the described projects will not adversely affect surface waters.

Should you have any question, please contact me at 701-328-5239.

Sincerely,

Randy Kowalski  
Environmental Scientist  
Division of Water Quality

RK:dlp



# Public Service Commission

## State of North Dakota

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E-mail: [ndpsc@nd.gov](mailto:ndpsc@nd.gov)  
Phone 701-328-2400  
Toll Free 1-877-245-6685  
Fax 701-328-2410  
TDD 800-366-6888 or 711

December 9, 2009

Kathy Duttonhefner  
ND Parks & Recreation Department  
1835 Bismarck Expressway  
Bismarck, ND 58504

Dear Ms. Duttonhefner:

The Public Service Commission is planning reclamation activities in 2010 on the Buechler/Velva, Williams County Road 9 and Beulah/Zap Abandoned Mine Lands (AML) Sites. Work at the Williams County Road 9 and Beulah/Zap project sites are continuations of previous reclamation work. Although no reclamation has been conducted on the specific pits at the Buechler/Velva sites, previous work has been done within the Buechler problem area. These projects will be conducted by contractors selected through competitive bidding.


The 2010 Buechler/Velva Project is located in Sections 27, 28, and 30, T152N, R81W, in Ward County, North Dakota (see maps). These abandoned surface coal mine sites contain hazardous mine pits with steep highwalls. The plan of action is to backfill hazardous pits and highwalls with material from nearby spoil piles. Total surface area to be affected at this project location in 2010 will be approximately 150 acres, all of which were previously disturbed by surface coal mining. Areas affected by this project will be reseeded with locally adapted species native to western North Dakota. No pit dewatering is planned and all runoff from affected areas will flow into mine pits.

The 2010 Williams County Road 9 Project is located along Williams County Road 9, township roads and residential areas in portions of Sections 7, 8, 16, 17, 18, 19, 20 and 21, T154N, R100W, in Williams County near Williston (see map). The 2010 Beulah/Zap Project is located in residential areas and along public roads in Sections 7 and 8, T144N, R87W, Sections 12 and 13, T144N, R88W, and Sections 23 and 26, T144N, R89W, in Mercer County, North Dakota (see map). Residential areas and roads at these project sites are underlain by abandoned underground mines. The plan of action is to drill holes into the underground mine and, if necessary, pump cementitious grout through drilled holes into abandoned underground mined workings to help stabilize the surface from future mine collapse. The combined total area of disturbance in 2010 is expected to be twenty acres or less at all sites and surface disturbance will be fairly minimal.

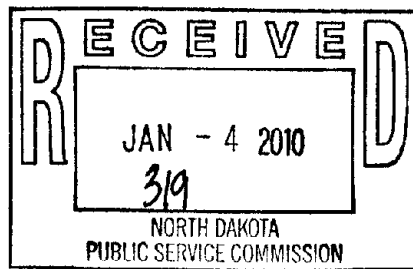
As part of the grant application process, our office requests concurrence that the proposed reclamation work will not adversely affect any threatened, endangered or rare plant species. We would appreciate your review and concurrence for the work proposed at these sites. Please reply regarding these proposed projects by January 20, 2010.

Attached are maps showing general locations of these proposed reclamation projects. Thank you for your assistance in this matter. If you have any questions or need more information, please contact me at [wdodd@nd.gov](mailto:wdodd@nd.gov) or 701.328.4101.

Sincerely,

A handwritten signature in black ink that reads "William E. Dodd". The signature is written in a cursive style with a large, stylized "D" at the end.

William E. Dodd,  
Assistant Director  
Abandoned Mine Lands Division



*John Hoeven, Governor  
Douglass A. Prchal, Director*

*1600 East Century Avenue, Suite 3  
Bismarck, ND 58503-0649  
Phone 701-328-5357  
Fax 701-328-5363  
E-mail [parkrec@nd.gov](mailto:parkrec@nd.gov)  
[www.parkrec.nd.gov](http://www.parkrec.nd.gov)*

December 31, 2009

William Dodd  
ND Public Service Commission  
600 E. Boulevard Ave., Dept. 408  
Bismarck, ND 58505-0480

RE: Reclamation Activities on Three Abandoned Mine Land (AML) Sites  
Buechler/Velva, Williams County Road 9, and Beulah/Zap

Dear Mr. Dodd:

The North Dakota Parks and Recreation Department has reviewed the above referenced proposal to perform reclamation activities on three AML sites located in Sections 27, 28, and 30, T152N, R81W, Ward County; Section 7-8 and 16-21, T154N, R100W, Williams County; and Sections 7 and 8, T144N, R87W, Sections 12 and 13, T144N, R88W, and Sections 23 and 26, T144N, R89W, Mercer County.

Our agency scope of authority and expertise covers recreation and biological resources (in particular rare plants and ecological communities). The project as defined does not affect state park lands that we manage or Land and Water Conservation Fund recreation projects that we coordinate.

The North Dakota Natural Heritage biological conservation database has been reviewed to determine if any current or historic plant or animal species of concern or other significant ecological communities are known to occur within an approximate one-mile radius of the project area. Based on this review, there are no known occurrences within or adjacent to the project area.

Because this information is not based on a comprehensive inventory, there may be species of concern or otherwise significant ecological communities in the area that are not represented in the database. The lack of data for any project area cannot be construed to mean that no significant features are present. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. We would appreciate receiving a hard copy or digital copy of the wildlife and botanical surveys and evaluations for the project area.

Regarding any reclamation efforts, we recommend that any impacted areas be revegetated with species native to the project area.

We appreciate your commitment to rare plant, animal and ecological community conservation, management and inter-agency cooperation to date. For additional information please contact Kathy Duttonhefner (701-328-5370 or [kgduttonhefner@nd.gov](mailto:kgduttonhefner@nd.gov)) of our staff. Thank you for the opportunity to comment on this proposed project.

Sincerely,

Jesse Hanson, Coordinator  
Planning and Natural Resources Division

R.USNDNHI\*2009-390

.....  
*Play in our backyard!*



# Public Service Commission

## State of North Dakota

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### COMMISSIONERS

Kevin Cramer  
Tony Clark  
Brian P. Kalk

Executive Secretary  
Darrell Nitschke

600 E. Boulevard Ave. Dept 408  
Bismarck, North Dakota 58505-0480  
Web: [www.nd.gov/psc](http://www.nd.gov/psc)  
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Phone 701-328-2400  
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Fax 701-328-2410  
TDD 800-366-6888 or 711

December 9, 2009

Mr. Jeff Towner, Field Supervisor  
U.S. Fish and Wildlife Service  
3425 Miriam Avenue  
Bismarck, ND 58501-7926

Dear Mr. Towner:

The Public Service Commission is planning reclamation activities in 2010 on the Buechler/Velva, Williams County Road 9 and Beulah/Zap Abandoned Mine Lands (AML) Sites. Work at the Williams County Road 9 and Beulah/Zap project sites are continuations of previous reclamation work. Although no reclamation has been conducted on the specific pits at the Buechler/Velva sites, previous work has been done within the Buechler problem area. These projects will be conducted by contractors selected through competitive bidding.

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As part of the grant application process, our office requests concurrence that the proposed reclamation work will not adversely affect any threatened, endangered or rare animal species. We would appreciate your review and concurrence for the work proposed at these sites. Please reply regarding these proposed projects by January 20, 2010.

Attached are maps showing general locations of these proposed reclamation projects. Thank you for your assistance in this matter. If you have any questions or need more information, please contact me at [wdodd@nd.gov](mailto:wdodd@nd.gov) or 701.328.4101.

Sincerely,

A handwritten signature in black ink, appearing to read "William E. Dodd". The signature is fluid and cursive, with the first name "William" and last name "Dodd" being clearly legible.

William E. Dodd,  
Assistant Director  
Abandoned Mine Lands Division

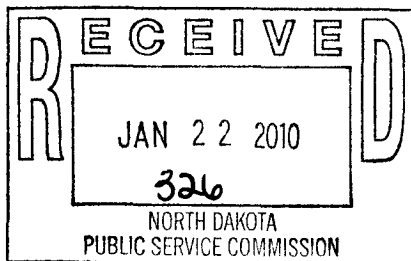
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Sincerely,



William E. Dodd,  
Assistant Director  
Abandoned Mine Lands Division



U.S. FISH AND WILDLIFE SERVICE	
ECOLOGICAL SERVICES	
ND FIELD OFFICE	
Project as described will have no significant impact on fish and wildlife resources. No endangered or threatened species are known to occupy the project area. IF PROJECT DESIGN CHANGES ARE MADE, PLEASE SUBMIT PLANS FOR REVIEW.	
1-21-10	Jeffrey K. Towner
Date	Jeffrey K. Towner Field Supervisor



## Public Service Commission State of North Dakota

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### COMMISSIONERS

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December 9, 2009

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U.S. Fish and Wildlife Service  
3425 Miriam Avenue  
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# Public Service Commission

## State of North Dakota

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Toll Free 1-877-245-6685  
Fax 701-328-2410  
TDD 800-366-6888 or 711

January 22, 2010

Jeffrey W. Fleischman, Director  
OSM Casper Field Office  
PO Box 11018  
150 East "B" Street – Room 1018  
Casper, WY 82602-5004

**RE: Eligibility Determination for 2010 Buechler/Velva, 2010 Williams County Road 9 Phase 5, and 2010 Beulah/Zap Phase 11 Projects in North Dakota.**

Dear Mr. Fleischman:

This letter is submitted under 30 CFR 874.12 as the required eligibility determination for lands included in the proposed abandoned mine lands reclamation projects. Legal descriptions for these lands are included with the request for authorization to proceed and are summarized below:

**2010 Buechler/Velva Project:** The W½ of Section 27, Section 28, and the NE¼ of Section 30, T152N, R81W, Ward County

**2010 Williams County Road 9 Phase 5 Project:** Portions of Sections 7, 8, 17, 18, 19, 20, and 22, T154N, R100W, Williams County

**Beulah/Zap Phase 11 Project:** Portions of Sections 7 and 8, T144N, R87W, Sections 12 and 13, T144N, R88W, and Sections 23 and 26, T144N, R89W, Mercer County

Eligibility Determination - 30 CFR 874.12

The requirements of this section of the Abandoned Mine Reclamation Program set forth the following criteria for eligibility for reclamation activities (paraphrased):

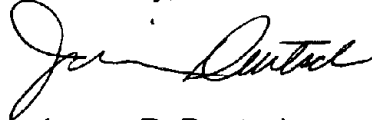
- a. Was the real property subjected to coal mining and related processes?

- b. Did the coal mining processes on the real property occur prior to August 3, 1977, and was said real property left or abandoned in an unreclaimed or inadequately reclaimed condition? and,
- c. Is there continuing responsibility for reclamation by the operator, permittee, or agent of the permittee under the statutes of the State of North Dakota or the government of the United States?

Based upon available historical information, I find that the described real properties were mined for coal; that the coal mining activity occurred prior to August 3, 1977; and, that the property has been left in an abandoned and unreclaimed state. I further find that there is no continuing responsibility for reclamation by the operator, permittee or agent of the permittee under statutes of the State of North Dakota or the government of the United States.

Based on these findings, it is my opinion that the described real properties meet the eligibility requirements of 30 CFR 874.12 for abandoned mine reclamation.

Sincerely,

A handwritten signature in black ink, appearing to read "James R. Deutsch", written in a cursive style.

James R. Deutsch  
Director  
AML Division



**U.S. Department of the Interior**  
**Office of Surface Mining - Reclamation and Enforcement**  
 Abandoned Mine Land Inventory System (AMLIS)

AMLIS Key: **ND000004SGA**

PA Name: **BUECHLER KNORR**

Prepared: **11/23/1987**

By: **Dr. Lou Ogaard**

State/Tribe: **NORTH DAKOTA**

PU Number: **103**

Mining Type: **Surface and Underground**

PU Name: **OAK CREEK**

County: **WARD**

Quadrangle: **BENEDICT NW**

FIPS: **38101**

Cong.Dist: **1**

Longitude: **-101.12500000 (DMS=101:07:30)**

Watershed: **LAKE SAKAKAWEA**

Latitude: **47.87500000 (DMS=47:52:30)**

Surf.Owners: Priv. **90 %** State **10 %** Indian **0 %** PkSvc **0 %** BLM **0 %** ForSvc **0 %** Other **0 %**

Ore Types: **none**

**Problem Summary**

Pri. - Prob. - Fnd.Src.*	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
1 Dangerous Highwalls (Feet)								
002	0.0	0	0.0	0	0.0	0	0.0	0
Total P 1		0		0		0		0
2 Dangerous Highwalls (Feet)								
000	20,000.0	3,000,000	0.0	0	0.0	0	20,000.0	3,000,000
2 Hazardous Equipment & Facilities (Count)								
000	1.0	10,000	0.0	0	0.0	0	1.0	10,000
2 Subsidence (Acres)								
000	6.0	317,732	0.0	0	12.0	622,268	18.0	940,000
Total P 2		3,327,732		0		622,268		3,950,000
PAD Total		3,327,732		0		622,268		3,950,000

\* Alternate Funding sources: 002-AML 000- none



**U.S. Department of the Interior**  
**Office of Surface Mining - Reclamation and Enforcement**  
Abandoned Mine Land Inventory System (AMLIS)

AMLIS Key: **ND000111SGA**

PA Name: **WILLIAMS COUNTY 9**

Prepared: **11/22/2000**

By: **Beechie, Bruce**

State/Tribe: **NORTH DAKOTA**

PU Number: **92**

Mining Type: **Underground**

PU Name: **CAMP CREEK**

County: **WILLIAMS**

Quadrangle: **WILLISTON EAST**

FIPS: **38105**

Cong.Dist: **1**

Longitude: **-103.58472222 (DMS=103:35:04)**

Watershed: **LITTLE MUDDY**

Latitude: **48.16666667 (DMS=48:10:00)**

Surf.Owners: Priv. **20 %** State **80 %** Indian **0 %** PkSvc **0 %** BLM **0 %** ForSvc **0 %** Other **0 %**

Ore Types: **none**

**Problem Summary**

Pri. - Prob. - Fnd.Src.*	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
2 Subsidence (Acres)								
000	29.1	1,737,310	0.0	0	25.6	1,678,490	54.7	3,415,800
Total P 2		1,737,310		0		1,678,490		3,415,800
PAD Total		1,737,310		0		1,678,490		3,415,800

\* Alternate Funding sources: 000- none



U.S. Department of the Interior  
Office of Surface Mining - Reclamation and Enforcement  
Abandoned Mine Land Inventory System (AMLIS)

AMLIS Key: **ND000014SGA**

PA Name: **BEULAH**

Prepared: **3/2/1993**

By: **DR. LOU OGAARD**

State/Tribe: **NORTH DAKOTA**

PU Number: **64**

Mining Type: **Underground**

PU Name: **HAZEN DAM**

County: **MERCER**

Quadrangle: **BEULAH**

FIPS: **38057**

Cong.Dist: **1**

Longitude: **-101.75000000 (DMS=101:45:00)**

Watershed: **KNIFE**

Latitude: **47.25000000 (DMS=47:15:00)**

Surf.Owners: Priv. **80 %** State **20 %** Indian **0 %** PkSvc **0 %** BLM **0 %** ForSvc **0 %** Other **0 %**

Ore Types: **none**

### Problem Summary

Pri. - Prob. - Fnd.Src.*	Unfunded		Funded		Completed		Total	
	Units	Costs	Units	Costs	Units	Costs	Units	Costs
1 Surface Burning (Acres)								
000	0.0	0	0.0	0	0.0	0	0.0	0
Total P 1		0		0		0		0
2 Dangerous Highwalls (Feet)								
000	3,200.0	736,000	0.0	0	0.0	0	3,200.0	736,000
2 Subsidence (Acres)								
000	630.5	2,939,408	0.0	0	419.5	7,060,592	1,050.0	10,000,000
Total P 2		3,675,408		0		7,060,592		10,736,000
PAD Total		3,675,408		0		7,060,592		10,736,000

\* Alternate Funding sources: **000- none**